

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference 30A-92 632 | FOR FURTHER ACTION | See Form PCT/IPEA/416 |
| International application No. PCT/EP2004/003006 | International filing date (day/month/year) 22.03.2004 | Priority date (day/month/year) 31.03.2003 |
| International Patent Classification (IPC) or national classification and IPC | | |
| Applicant MANG, Thomas | | |

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|----|---|
| 1. | This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. |
| 2. | This REPORT consists of a total of <u>6</u> sheets, including this cover sheet. |
| 3. | This report is also accompanied by ANNEXES, comprising: <ul style="list-style-type: none"> a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>1</u> sheets, as follows: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |
| 4. | This report contains indications relating to the following items: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application |

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| Date of submission of the demand | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003006

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-16 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-6 _____ received by this Authority on 18.03.2005 with the letter of 18.03.2005
- nos.* _____ received by this Authority on _____
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☒ the claims, nos. 7-8 _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | |
|--|---|-----|-----|
| 1. Statement | | | |
| Novelty (N) | Claims | 1-6 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-6 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-6 | YES |
| | Claims | | NO |
| 2. Citations and explanations (Rule 70.7) | | | |
| <u>Re. Box I</u> | | | |
| Basis of the report | | | |
| <p>The set of claims submitted with the letter of 18 March 2005 meets the requirements of PCT Article 34(2)(b) and serves as the basis for this report.</p> | | | |
| <u>Re. Box V</u> | | | |
| Reference is made to the following documents: | | | |
| D1: EP-B-0 858 478 (BASF AG) 19 January 2000 | | | |
| D4: WO 99/35208 A (DAETWYLER AG GUMMI & KUNSTSTOFF) 15 July 1999 | | | |
| <p>Document D4 is considered the prior art closest to the subject matter of independent claims 1 and 6 and discloses (the references between parentheses refer to that document):</p> <p>a water-swellaable sealing composition that is based on a rubber matrix and contains a powdery,</p> | | | |

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

water-absorbent material made from a combination of, for example, polysaccharides and a (meth)acrylate-based synthetic polymer (page 4; lines 7 to 20).

The subject matter of claims 1 and 6 thus differs from that of D4 in that the synthetic polymer is not modified using a hydrophilic side chain. The subject matter of claims 1 and 6 is therefore novel (PCT Article 33(2)).

The present invention can therefore be considered to address the problem of improving sealing properties in relation to water that contains electrolytes.

The solution to this problem as proposed in claims 1 and 6 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons:

Although cross-linked polymers with (meth)acrylic acid esters of polyethylene glycols and the use thereof in powder form in sealing materials is known from D1 (paragraphs [0020] and [0069]), neither D4 nor D1 indicates that this super absorber can be used in a rubber matrix to specifically solve the problem of re-swelling and to improve sealing in relation to water that contains electrolytes.

Claims 2 to 5 are dependent on claim 1 and

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
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therefore likewise meet the PCT requirements for
novelty and inventive step.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Contrary to PCT Rule 5.1(a)(iii), the description is inconsistent with the claims.

The indications relating to the type of side chain S in the description, page 3, line 7 ("preferably") and page 3, line 27 to page 4, line 8 (alternative hydrophilic side chains), create the impression that the subject matter for which protection is sought does not match that defined in the claims and thus result in a lack of clarity (PCT Article 6) when the description is used to interpret the claims.